

3. Mitchell PL, Parlin RW, Blackburn H: Effect of vertical displacement of the arm on indirect blood-pressure measurement. *N Engl J Med* 1964 Jul 9; 271:72-74
4. Merendino J, Finnerty FA: Importance of the position of the arm on the level of arterial blood pressure. *JAMA* 1961 Jan 7; 175:51-53
5. Silverberg DS, Shemesh E, Iaina A: The unsupported arm: A cause of falsely raised blood pressure readings. *Br Med J* 1977 Nov 19; 2:1331

\* \* \*

### Dr Rose Responds

TO THE EDITOR: Dr Kroenke's criticisms and commendation are appreciated, as well as his pertinent literature search which I did not pursue far enough.

With reference to Merendino and Finnerty's 1961 article the drawings and readings show the observed pressures were higher with the entire arm hanging at the patient's side. The other drawing with the correct position shows the forearm resting on the table but below heart level; however, the cuff is at heart level. In the 1964 article by Mitchell and co-workers the photograph shows the arm awkwardly abducted and few would take a seated reading in such a manner. In Silverberg's 1971 article he states the cuff must be at heart level with the arm supported in a sitting or standing patient to avoid isometric contraction of the arm which could raise the blood pressure.

Further readings were taken on seated patients with the forearm *supported* in the patient's lap or on the armrest of the chair with the cuff at heart level and no significant differences were recorded. My original seated readings were taken with the forearm supported in the lap. These positions removed the dependency factor of Merendino and the isometric factor of Silverberg. The awkward position of Mitchell still has the cuff close to heart level as would occur with the forearm resting on a table in front of the patient so on that point I stand (sit) corrected. However, the height of the patient relative to the table could result in elevation of arm and cuff above heart level so care has to be taken.

I am sure that Dr Kroenke would agree that too often health care personnel, with a patient supine, seated or standing, elevate the patient's arm for the observer's comfort, and by raising the entire arm including cuff above heart level obtain a false low reading—and that such maneuvers should be avoided. Also, depending on the relative height of patient and observer, the holding of the patient's arm in the observer's armpit could give a false low reading.

HARVEY L. ROSE, MD  
Carmichael, California

### Polymicrobial Enteric Septicemia From Coffee Enemas

TO THE EDITOR: Enemas are used as part of several different "alternative treatment" programs prescribed as cancer therapy. As part of the Gerson Cancer Therapy,<sup>1</sup> coffee enemas may be administered as frequently as every two hours. The caffeine allegedly is absorbed into the portal circulation and stimulates hepatocellular

function to detoxify the products of tumor cell metabolism. We report here a case of polymicrobial enteric septicemia associated with coffee enema therapy.

A 23-year-old woman with advanced breast cancer failed to respond to standard chemotherapeutic regimens. After rapidly progressive hepatic metastatic lesions developed, she sought "alternative therapy" in Tijuana, Mexico. Despite treatment, including liver extract administration and frequent coffee enemas until the day before admission to our hospital, hepatic failure occurred. Admission paracentesis yielded sterile ascitic fluid, but stool culture and two separate sets of blood cultures grew *Salmonella enteritidis* group D and *Campylobacter fetus* subspecies *intestinalis*. The patient died before further gastrointestinal evaluation could be completed, and permission for autopsy was not granted.

A recent report described two coffee enema-related deaths attributable to severe electrolyte imbalance.<sup>2</sup> An outbreak of colonic amebiasis has been traced to a contaminated colonic irrigation apparatus used in another "alternative" treatment setting. We are aware of no previous reports of coffee enema-related septicemia.

Numerous authors have studied the bacteremic risk of colonic instrumentation (sigmoidoscopy or barium enema). A transient bacteremia can frequently be documented during these procedures, with enteric organisms cultured from up to 23% of blood specimens taken during or immediately following such manipulations.<sup>4-6</sup> Cases of significant septicemia complicating barium enema are also rare.<sup>7-9</sup> This virtual absence of persistent bacteremia may be attributable to effective clearance in the hepatic reticuloendothelial system of bacteria entering the portal circulation.

We believe that our patient's polymicrobial septicemia from two unusual enteric pathogens was induced by enema therapy in the setting of severely compromised hepatic function and portal hypertension. This complication should be considered an additional potential risk of coffee enema therapy.

KIM A. MARGOLIN, MD  
Fellow

MARK R. GREEN, MD  
Adjunct Professor of Medicine  
Department of Medicine  
Division of Hematology/Oncology  
University of California, San Diego,  
School of Medicine

### REFERENCES

1. Gerson MA: Cancer Therapy: Results of Fifty Cases. New York, Dura Books, 1965
2. Eisele JW, Reay DT: Deaths related to coffee enemas. *JAMA* 1980 Oct 3; 244:1608-1609
3. Istre GR, Kreiss K, Hopkins RS, et al: An outbreak of amebiasis spread by colonic irrigation at a chiropractic clinic. *N Engl J Med* 1982; 307:339-342
4. Butt J, Hentges D, Pelican G, et al: Bacteremia during barium enema study. *AJR* 1978 Apr; 130:715-718
5. Goldman G, Miller SA, Furman DS: Sigmoidoscopy and bacteremia (Letter). *Ann Intern Med* 1982; 97:784-785
6. Le Frock JL, Ellis CA, Klainer AS, et al: Transient bacteremia associated with barium enema. *Arch Intern Med* 1975 Jun; 135:835-837
7. Day HA, Cho CT: Barium enema septicemia (Letter). *JAMA* 1974 Mar 18; 227:1258
8. Larsen E: Barium enema complications (Letter). *JAMA* 1974 Aug 7; 229:639-640
9. Richman LS, Short WF, Cooper WM: Barium enema septicemia—Occurrence in a patient with leukemia. *JAMA* 1973 Oct 1; 226:62-63